



**THE PORT AUTHORITY  
OF NY & NJ**

*Peter K. Jurek*  
ENGINEERING PROGRAM MANAGER  
W.T.C.  
*Buelson*  
CHIEF ELECTRICAL ENGINEER

I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF ONE OF THE CONTRACT DRAWINGS CONSTITUTING A PART OF CONTRACT NO. 11 IN THE FORM IN WHICH SAID DRAWINGS EXISTED AT THE TIME THE SAID CONTRACT WAS EXECUTED BY THE PARTIES.

DATE 7-15-97 *Peter K. Jurek* SPEC. WRITER  
DATE 7-18-97 *Buelson* ENGINEER OF DESIGN

No. Date Revision Approved

Engineering Department  
Design Divisions  
**The World Trade Center**

Title  
**FIRE ALARM SYSTEM  
DEVICE UPGRADE  
PHASE III**  
ELECTRICAL

1 WTC  
**SPEAKER, STROBE & SMOKE  
DETECTOR MOUNTING DETAILS  
AND WIRING DIAGRAMS**

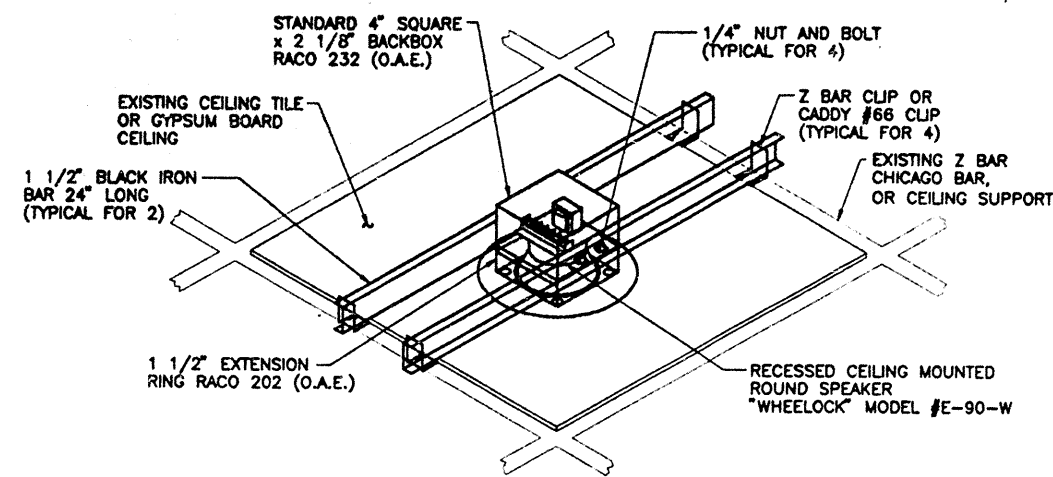
This drawing subject to conditions in contract. All inventions, ideas, designs and methods herein are reserved to Port Authority and may not be used without its written consent.

S. FELDMAN B. FALDU  
Designed by Drawn by Checked by

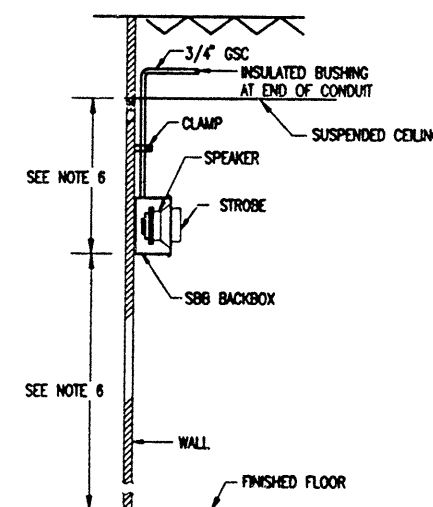
Date 2/4/97 Scale AS SHOWN  
Contract Number Drawing Number  
**WTC-861.077 E-17**

**NOTES:**

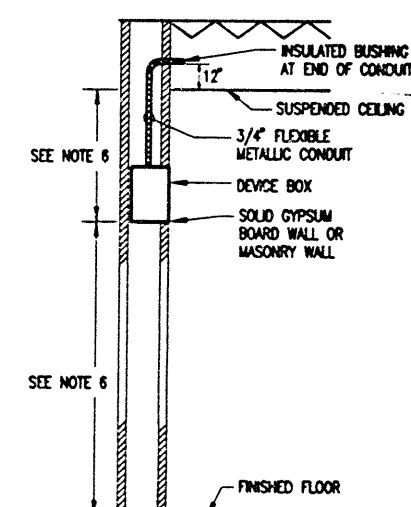
1. FOR LEGEND, ABBREVIATIONS & GENERAL NOTES, SEE DWG E-1
2. FOR WIRING & RISER DIAGRAM, SEE DWG E-2 THRU E-13.
3. RETURN AIR SMOKE DETECTORS MOUNTED 8" IN FRONT OF THE RETURN AIR GRILL.
4. DETECTOR BASE WIRE PENETRATION TO BE SEALED TO PREVENT "DRAFTING" WHERE CONDUIT USED.
5. SHIELD MUST BE CONTINUOUS AND INSULATED FROM BOXES, CONDUITS, ETC.
6. CONTRACTOR SHALL INSTALL THE FIRE ALARM DEVICE AT 80" ABOVE FINISHED FLOOR OR 6" BELOW SUSPENDED CEILING, WHICHEVER IS LOWER.



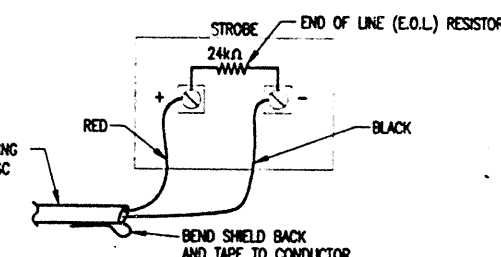
**TYPICAL RECESSED SPEAKER INSTALLATION  
DETAIL "B"**  
N.T.S.



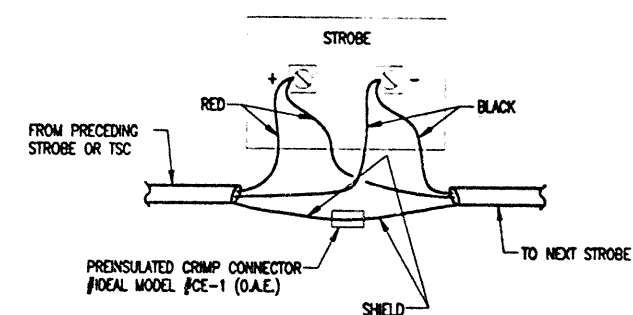
**TYPICAL WALL MOUNTED STROBE, SPEAKER  
STROBE/SPEAKER INSTALLATION DETAIL "C"**  
N.T.S.



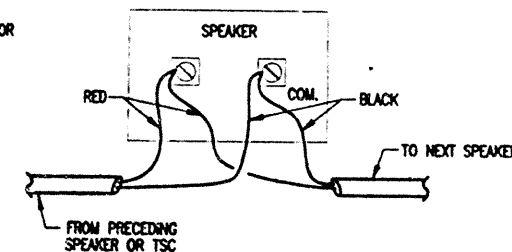
**TYPICAL FLUSH MOUNTED STROBE, SPEAKER  
STROBE/SPEAKER INSTALLATION DETAIL "D"**  
N.T.S.



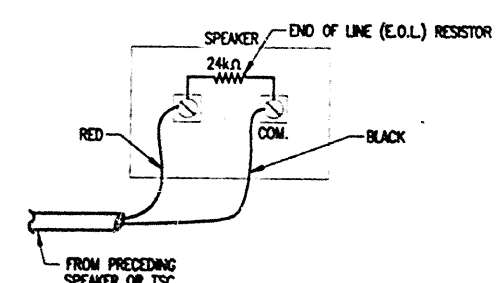
**TYPICAL STROBE E.O.L. WIRING DIAGRAM  
DETAIL "G"**  
N.T.S.



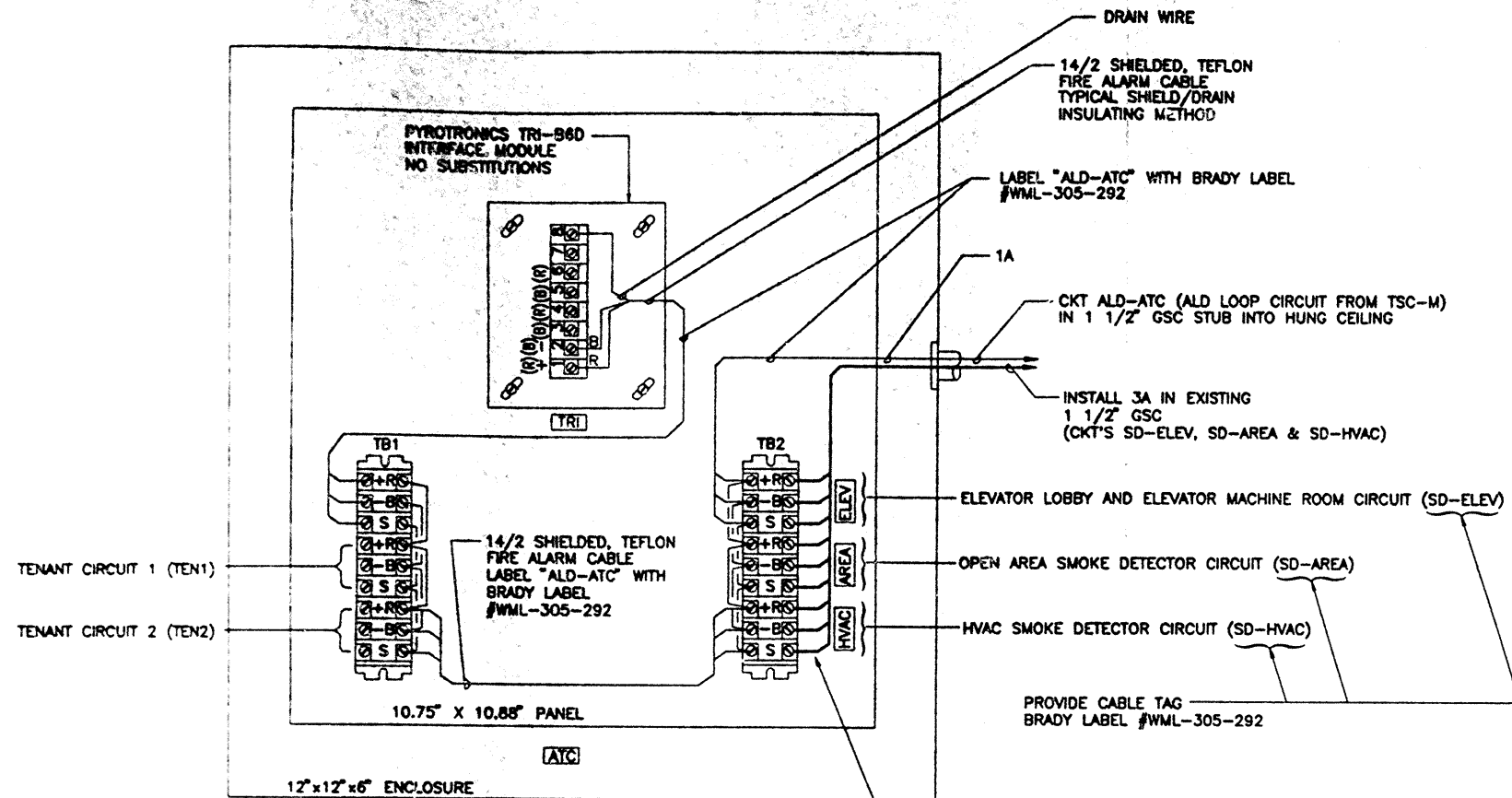
**TYPICAL STROBE WIRING DIAGRAM  
DETAIL "H"**  
N.T.S.



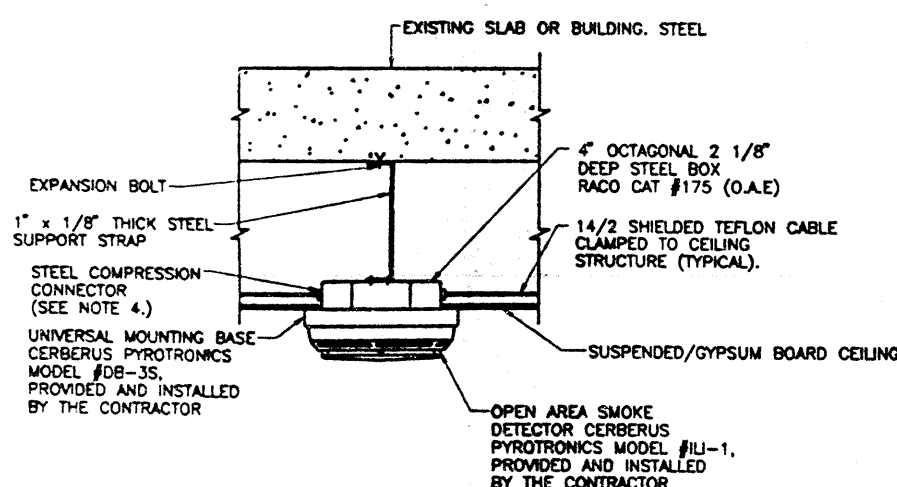
**TYPICAL SPEAKER WIRING DIAGRAM  
DETAIL "M"**  
N.T.S.



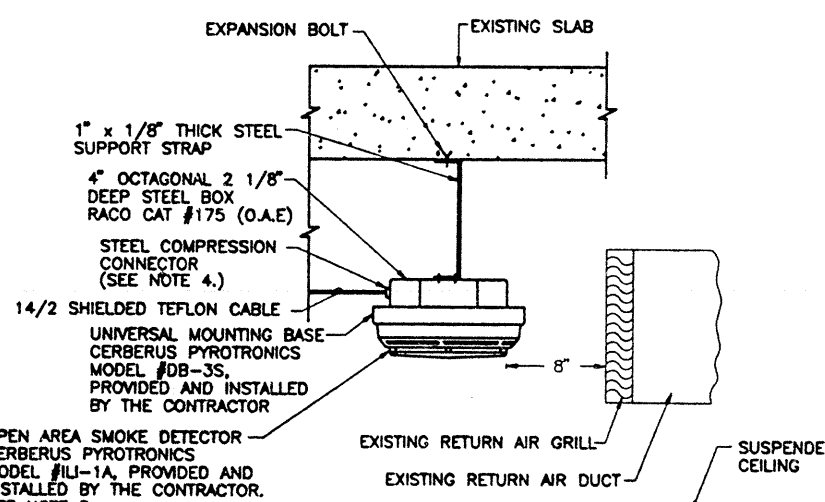
**TYPICAL SPEAKER E.O.L. WIRING DIAGRAM  
DETAIL "N"**  
N.T.S.



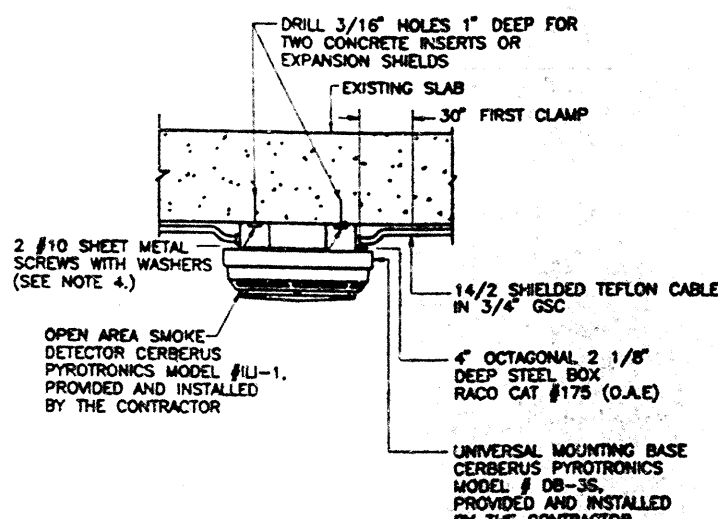
**ATC CABINET  
DETAIL "A"**  
N.T.S.



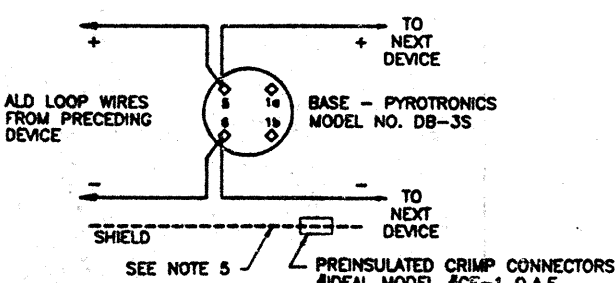
**SMOKE DETECTOR INSTALLATION FOR SUSPENDED CEILING/SHEETROCK  
DETAIL "E"**  
N.T.S.



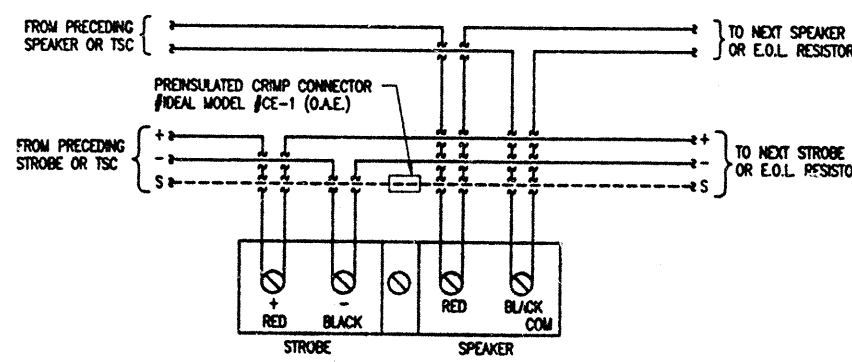
**SMOKE DETECTOR INSTALLATION IN FRONT OF RETURN AIR GRILL  
DETAIL "F"**  
N.T.S.



**SMOKE DETECTOR INSTALLATION FOR OPEN CEILING  
DETAIL "J"**  
N.T.S.



**SMOKE DETECTOR WIRING DIAGRAM  
DETAIL "K"**  
N.T.S.



**TYPICAL STROBE/SPEAKER WIRING DIAGRAM  
DETAIL "L"**  
N.T.S.